



DETAILED DESCRIPTION OF THE EMBODIMENTS

On Fig. 1,2, and 3 the handle(22) which protrudes into the toilet tank(23), is integrally connected to the Shaft(26). The Handle(22) will rotate from a neutral position to the right and to the left approximately 45 degrees in both directions. A mechanical device (24) will be installed on the inside wall of the tank, for rotational stops for the Shaft(26), and a cam-like screw, threaded into the Shaft (21) will stop the shaft at the rotations points. The Interrupter cylinder is mounted inside the tank where it is in proximity to the Lever arms. On the shaft also are two longitudinal Lever arms (37) and (34), installed, as shown, as an integral part of the shaft on Fig 1, 2 &3 (The length of the shaft is exaggerated for clarity.). On Fig 2 the Lever arm (37) has a chain(32) installed directly to the Interrupter's (36) Apportioning weighted level controller valve (35). When the Handle(26) is rotated to the right (for a Tier 1 type flush) the shaft lever arm (34) will rise, raising the Interrupter valve mechanisms (36) in the control cylinder. That in turn raises the Flapper valve (29A). causing water to discharge into the toilet bowl(30). For the use of Flapper valve (29B) see Fig 3.(both are mounted on the same body). Water in the toilet tank (38) will stop discharging when gravity forces the Apportioning weighted valve(35) and Shut-off valve(28) to close, and then gravity will also cause the Flapper valve (29A) to close. The Apportioning weighted valve(35) has a number of vertical orifices that releases water pressure that is flowing through the Interrupter cylinder(36) and hence drops the valves (35)(28) to the closed position. The diameter of the cylinder, the weight of the Apportioning valve, and the number and size of orifices control the time it takes to interrupt the water discharge. The water will discharge from the tank (30) into the toilet bowl for the flush. The Air float ball (31) as it sinks to the cut-off point opens the Water supply valve switch (40). This will continue to refill the tank until the Air float ball(31) rises to the Water supply switch (40) shut-off point(38). This leaves the toilet ready for the next operation.

In Fig 3, Handle(22) is turned to the left to the rotational stop. The Shaft(26) Longitudinal arm (34) will rise, raising the Flapper valve(29B) directly via Chain (32) causing the tank water to completely discharge(39) into the toilet bowl. This will be the Tier 2 Flush, removing any waste in the toilet bowl. The Air float ball, at the bottom of the tank, will start to rise as the Water supply valve (40) is engaged, until it reaches the shut-off point. The water will have reached the high point, ready for the next operation.



REFERENCES CITED

U. S. Patent Documents

4,122,564	10/31/78	Addicks	4/405
5,396,666	5/14/95	PangYenTsai	4/325
5,887,292	3/30/99	Goren	4/363
6,442,772 B2	9/3/02	Han	4/325
6,571,400 B1	6/3/03	Reid	4/364